

Remarks

Favorable reconsideration of this application, in view of the above amendments and in light of the following remarks and discussion, is respectfully requested.

Claims 1-11 and 16-22 are currently pending in the application; Claims 1-11 and 16 having been amended, non-elected Claims 12-15 having been canceled, and new Claims 17-22 having been added, by way of the present response. Applicants respectfully assert that support for the changes to the claims is self-evident from the originally filed disclosure, including the original claims, and that therefore no new matter has been added.

In the outstanding Office Action, the drawings were objected to; Claims 5 and 9 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1, 2, 6, 7, 10, and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,815,374 to Howell in combination with U.S. Patent No. 6,091,155 to Jonaidi; and Claims 1-11 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,784,262 to Sherman in combination with Jonaidi.

As stated above the drawings were objected to because Figures 18a, 18b, and 19-21 were not designated by a legend such as "Prior Art." In response, as shown in the attached replacement sheets, Applicants have so designated the figures. Thus, Applicants respectfully request that the objection to the drawings be withdrawn.

As stated above Claims 5 and 9 were rejected under 35 U.S.C. § 112, second paragraph. In response, Applicants have amended Claims 5 and 9 to overcome the rejection. Thus, Applicants respectfully request that the rejection of Claims 5 and 9 under 35 U.S.C. § 112, second paragraph, be withdrawn.

As stated above Claims 1, 2, 6, 7, 10, and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Howell in combination with Jonaidi, and Claims 1-11 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sherman in combination with

Jonaidi. Applicants respectfully assert that the above amendments to the claims have overcome the rejections for the following reasons.

The present invention is directed to electronic components. Independent Claims 1 and 16 recite a semiconductor including first lands electrically connected to second lands, the second lands connected to wires of a board. At least one of the second lands includes a primary land and an auxiliary land. The at least one second land connects to at least one of the wires where a predetermined tensile stress is configured to be applied between the at least one second land and the at least one wire. The primary land includes an arcuate shape. The auxiliary land includes a first portion disposed adjacent the primary land and a second portion connecting to the at least one wire, the first portion having a greater cross sectional area than the second portion.

Howell is directed to a method and apparatus for redirecting input/output connections of integrated circuit chip configurations. Sherman is directed to an arrangement of pads and through holes for semiconductor packages. The Office Action explicitly concedes that neither of Howell and Sherman teaches or suggests, however, the claimed features of an auxiliary land, as recited in independent Claims 1 and 16.¹

Specifically, independent Claims 1 and 16 recite “at least one of the second lands comprises a primary land and an auxiliary land . . . , the primary land comprises an arcuate shape, and the auxiliary land comprises a first portion disposed adjacent the primary land and a second portion connecting to the at least one wire, the first portion having a greater cross sectional area than the second portion.”

The Office Action relies on Jonaidi to remedy the deficiencies of Howell and Sherman. Applicants respectfully assert that Jonaidi does not remedy these deficiencies, however, for the following reasons.

¹ Page 4, lines 7-11 of paragraph 8; and page 7, lines 5-9, of the Office Action.

Jonaidi is directed to a ball grid array land pattern. As shown in Figures 2-5, for example, of Jonaidi, the ball grid array land pattern 30 includes a rectangularly-shaped landing pad 38.

Thus, Applicants respectfully assert that Jonaidi does not teach or suggest the claimed features of a land including a primary land having an arcuate shape and an auxiliary land including a first portion disposed adjacent the primary land and a second portion connecting to a wire, the first portion having a greater cross sectional area than the second portion, as recited in independent Claims 1 and 16. Specifically, Applicants respectfully assert that Jonaidi does not show or state the landing pad 38 having an arcuate shape, but rather show the landing pad 38 having a rectangular shape, for example.

Applicants respectfully assert that Jonaidi states that the rectangularly-shaped landing pad 38 is provided to eliminate specific problems and to provide specified advantages. Specifically, Jonaidi states that the rectangular landing pad achieved by his invention provides greater adhesion with an underlying substrate.² Jonaidi further states that the increased area of the rectangular landing pad reduces pullback.³

Applicants further respectfully assert that the claimed features recited in independent Claims 1 and 16 can provide numerous advantages that are not provided by Jonaidi. By way of specific non-limiting examples, Applicants respectfully assert that the claimed electronic component including the primary land having an arcuate shape and the specified auxiliary land can avoid stress concentrations, and thus can avoid breaks with the wire under a variety of conditions, including application of tensile stress during assembly and warpage correction.⁴ Applicants respectfully assert that Jonaidi cannot provide such advantages, because corners between the landing pad 38 and the conductive connecting region 40 can

² Column 6, lines 20-32.

³ Column 6, lines 33-51.

⁴ Please see, for example, from page 21, line 11, to page 23, line 23, of Applicants' originally filed disclosure.

result in stress concentrations that can be avoided by the claimed electronic component recited in the independent claims.

Thus, for the above reasons, Applicants respectfully assert that none of Howell, Sherman, and Jonaidi, whether taken alone or in combination, teaches or suggests the claimed features recited in independent Claims 1 and 16. Therefore, Applicants respectfully request that the rejections of independent Claims 1 and 16 under 35 U.S.C. § 103(a) be withdrawn, and the allowance of independent Claims 1 and 16.

Applicants respectfully assert that Claims 2-11 are allowable for the same reasons as independent Claim 1 from which they depend, as well as for their own features. Thus, Applicants respectfully request that the rejections of dependent Claims 2-11 under 35 U.S.C. § 103(a) be withdrawn, and the allowance of dependent Claims 2-11.

Applicants respectfully assert that new independent Claim 17 is allowable for reasons similar to those of independent Claims 1 and 16. Further, Applicants respectfully assert that Claims 18-22 are allowable for the same reasons as independent Claim 17 from which they depend, as well as for their own features. Therefore, Applicants respectfully request the allowance of new Claims 17-22.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-11 and 16-22 is earnestly solicited.

Application No. 10/088,086

Reply to Office Action of March 22, 2004

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.

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(OSMMN 06/04)

Respectfully submitted,

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